

Kenneth Hwang

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PROFESSIONAL EXPERIENCE

MirraViz, Fremont, CA

Oct 2016 – Present

Product Engineer

- Developed algorithms and wrote Python and Unity C# software programs using Numpy and Pandas to create manufacturing input files for nanotechnology optical screen surface designs and model performance
- Designed and tested multiple series of design of experiments (DOE) for root cause analysis to determine optimal design parameters needed for manufacturing optical design of product level screen surface
- Optimized display screen manufacturing process and reduced total manufacturing time from estimated 3+ months to less than 2 weeks, allowing company to hit first product milestone and secure additional funding
- Created 3D-printed prototype designs with Autodesk Inventor CAD for optical measurements and characterization in iterative product testing
- Ignited company's online presence with a viral 575.8k view Reddit post, increasing web traffic to company website by 3000%, with an additional coverage in a following product video with 12+ million views
- Led marketing and PR content creation and managed all social media, including company's website, Youtube channel, Facebook page, Google Adwords campaigns, and tradeshow collateral designs

PROJECTS

Mechatronics:

Autonomous height control of levitating ball – Measurement Systems for Mechatronics

- Wrote LabView program to autonomously adjust fan speed for desired ball height and graph performance
- Characterized sensor output voltage to ball height relationship to calibrate infrared proximity sensor

Self-balancing ball-on-plate system – Mechatronics Design

- Spearheaded design, manufacturing, integration, and testing of real-time embedded system that implements feedback control with image processing to successfully automatically balance ball on plate
- Integrated electromechanical system with NI MyRIO FPGA, machined with laser cutting, water-jetting, mill

Computer Science:

Twitter Trends (Python): Created a geographical visualization of sentiments in US based on tweet words

Depth map (C): Optimized image processing, x3.26 and x4.88 speedup with SSE/SIMD and OpenMP

Tex61 (Java): Developed text formatter supporting fill, justify, pagination, commands, endnotes, etc.

Chess (MatLab): Implemented 2P chess with graphical user interface and solved 8-queens problem

EDUCATION

U.C. Berkeley, Bachelor of Science in Mechanical Engineering

Graduated: May 2016

Make School & Upload VR, San Francisco, CA

Jun 2016 – Aug 2016

Virtual Reality Developer

- Created VR experiences in Unity3D/C# for HTC Vive, incorporating in-game user analytics and optimizing for high-fps performance as well as VR best practices while learning game design
- Developed own VR game to allow users to explore powers and experiences that would normally be impossible in everyday life, such as telekinesis, teleportation, free flying, and elemental Earth superpowers

SKILLS AND INTERESTS

Certifications:

SolidWorks Associate (2013), LabVIEW Associate Developer (2016)

Programming languages:

Python, C#, C, Java, HTML/CSS; Softwares: Adobe Premiere Pro CC, Photoshop, MatLab, SolidWorks, LabView, Git, Unity3D; Languages: English, Mandarin Chinese

Interests:

Robotics, Artificial Intelligence, Virtual Reality, Psychology, Gaming, Sci-Fi, Traveling